

other treatment related effects such as nausea. The present study was designed to estimate the utility decrement associated with increasing severities of anaemia. **METHODS:** Existing trial data was summarized in order to define health states related to the following haemoglobin levels: 7.0–8.0; 8.0–9.0; 9.0–10.0; 10.0–10.5; 10.5–11.0; 11.0–12.0; and 12+g/dL. These health states were based on the FACT-An fatigue related items and were reviewed by clinicians and two quality of life experts. Forty interviews with the general public (recruited through advertisements) were conducted where participants were asked to rate the health states using a visual analogue scale (VAS) and standard gamble (SG). **RESULTS:** Mean (+95% CI) utility values were calculated for each health state anchored against death. The VAS scores ranged from  $19.3 \pm 3.9$  for 7–8g/dL Hb to  $53.8 \pm 6.7$  for 12+g/dL Hb. The standard gamble derived utility values showed a broadly linear change from 0.59  $\pm$  0.10 for 7–8g/dL Hb to 0.75  $\pm$  0.09 for 12+g/dL Hb. **CONCLUSIONS:** The health state utility scores show a linear decrement in line with worsening anaemia. These data underline the importance of cancer related fatigue for the general public.

## PCN34

#### UTILITY ASSOCIATED WITH SEVERITY OF CANCER-RELATED ANAEMIA (CRA): A SOCIETAL VALUATION

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**OBJECTIVES:** Anaemia is a common complication in cancer patients undergoing chemotherapy. Although quality-of-life (QoL) in CRA has been studied, utility values related to anaemia severity are lacking. The UK National Institute for Clinical Excellence (NICE) requests cost-utility analysis based on quality-adjusted life-years (QALYs) incorporating utilities elicited using public preferences. The objective was to use an appropriate method to estimate the impact of CRA, from a societal perspective. **METHODS:** A time-trade-off (TTO) questionnaire was designed and administered to a sample of laypeople: CRA health states were defined and described, based on the EuroQoL (EQ-5D) instrument, and the Functional Assessment of Cancer Therapy—Anaemia (FACT-An) instrument, and validated by clinical experts and cancer patients who had experienced anaemia. These descriptions were valued using the TTO elicitation method. Written informed consent was obtained and trained interviewers conducted surveys during February–March, 2004. **RESULTS:** In total, 110 respondents were interviewed; final analyses were performed on 106 respondents' data. Resultant utility scores were converted to ratios, reflecting the baseline of "cancer and chemotherapy, with no anaemia". Mean utility scores [SE] are 0.856 [0.014] for the no-anaemia state, and 0.781 [0.016], 0.615 [0.020] and 0.481 [0.020] for mild, moderate and severe anaemia states, respectively (Ratios of 1.00, 0.91, 0.72, and 0.56, respectively). **CONCLUSIONS:** This study strongly highlights a societal view that severity of cancer-related anaemia will significantly affect patient utility. For example, a change from no-anaemia to severe anaemia is predicted to approximately halve utility, independent of other factors. TTO appears to be a valid, and sufficiently sensitive method to highlight this effect. The ratios of relative effect are applicable to a range of "baseline" cancer utilities as multiplicative factors to estimate impact of anaemia within this broader context. These results could be incorporated within appraisals of therapies for CRA, and satisfy certain health technology assessment criteria.

#### VALUATION OF SOCIETAL PREFERENCE BETWEEN THERAPIES FOR CANCER-RELATED ANAEMIA (CRA): RECOMBINANT HUMAN ERYTHROPOETIN (RH-EPO) VERSUS BLOOD TRANSFUSION

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**OBJECTIVES:** Blood transfusion and rh-EPO are alternative treatment options for CRA. Potential benefits of rh-EPO treatment include improved health outcomes, but also more convenient administration. The objective was to elicit public preference scores associated with differences in these aspects of treatment, and subsequently use these "valued preferences" within a willingness-to-pay (WTP) analysis of cost-effectiveness of NeoRecormon (rh-EPO beta) versus transfusion. **METHODS:** A discrete choice experiment (DCE) was designed and administered to a sample of laypeople. Important aspects of treatment were defined through a literature review, plus input from expert clinician and patient interviews. An out-of-pocket cost attribute was included in order to estimate WTP values. Lay people were surveyed during February–March, 2004. A random effects probit model was used to analyse the data. WTP values for aspects of treatment were obtained by estimating the marginal rate of substitution between treatment attributes and the cost coefficient. Mean values of a unit improvement in each attribute level were used in an economic welfare analysis of the value of shifting from transfusion to NeoRecormon. **RESULTS:** A total of 110 respondents completed the DCE questionnaire. Final analyses were performed on 1086 observations, and showed high consistency, reliability, and face-validity. The following preferences were significant predictors of choice ( $p < 0.001$ ): Effectiveness: Higher level of relief from fatigue; Administration of treatment: Lower duration, subcutaneous/intravenous versus cannula injection, and GP versus hospital location; Safety: Lower risk of infection/allergic reaction; and Lower cost. Attribute levels were valued higher for NeoRecormon than for transfusion. This is reflected in an incremental welfare value of GBP368[95% CI: GBP318-GBP419]. **CONCLUSIONS:** This study shows that the public value the favourable attributes of treatment with rh-EPO, and indicates a likely patient preference for treatment with NeoRecormon over blood transfusion. This type of WTP analysis could be used to aid decisions regarding optimal management of CRA.

#### CANCER

##### CANCER—Health Policy

## PCN36

#### THE VALUE OF THE USE OF ANASTROZOLE AS AN ALTERNATIVE ADJUVANT THERAPY FOR EARLY BREAST CANCER (EBC) USING DISCRETE CHOICE WILLINGNESS-TO-PAY (WTP) METHODOLOGY

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**OBJECTIVES:** Anastrozole provides a treatment alternative for patients with EBC who cannot tolerate tamoxifen or in whom the drug is contraindicated. This study aimed to examine the value patients place on the ability of a treatment to decrease the

risk of breast cancer recurrence and mortality, while considering the side effect profile of the treatment. **METHODS:** A total of 85 women aged 50–83 (mean 61) years were recruited from the Australian general public. Participants completed questions regarding breast cancer experience and undertook a discrete choice task. The attributes used in the WTP scenarios included values for risk of breast cancer recurrence, mortality, hot flushes, vaginal abnormalities, deep vein thrombosis (DVT) and fracture, and also cost. The risk estimates against placebo were derived using indirect comparisons. **RESULTS:** A total of 74 subjects provided evaluable data. Eleven subjects were excluded because they were non-traders (3) or irrational in their choice task. The total WTP for anastrozole over placebo was AUS\$906.00 per month (95% CI: 380.7–1548.7) for 4–5 years. This included a WTP of AUS\$794.20, AUS\$481.70, AUS\$38.20 and AUS\$32.10 for the reduced risk of breast cancer recurrence, mortality, hot flushes and vaginal abnormalities, respectively. For DVT and fracture, which favoured placebo, negative WTPs of –AUS\$316.00 and –AUS\$124.20, respectively, were obtained. **CONCLUSIONS:** Subjects were willing to pay an average of AUS\$906.00 per month for 4–5 years for access to a treatment with the attributes of anastrozole. The reduced risk of breast cancer recurrence and mortality were the main drivers for the treatment; however, increased risk of fracture and DVT were also of concern to participants.

## PCN37

**DIFFERENCES IN TREATMENT PRACTICE, RESPONSE RATES AND COST OF EPOETIN ALFA AND DARBEPOETIN ALFA TREATMENT FOR ANEMIC CANCER PATIENTS: A RETROSPECTIVE ANALYSIS FROM SWEDEN**

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**OBJECTIVES:** To document and compare actual treatment practices, outcomes (hematopoietic response rates, Hb changes, transfusions, hospital care), and health care costs of Epoetin alfa and Darbepoetin alfa in the treatment of chemotherapy-related anemia in cancer patients in Sweden. **METHODS:** A retrospective chart review was performed at 3 Swedish hospitals. A total of 59 patients with cancer who developed chemotherapy-related anemia and received erythropoiesis-stimulating agent treatment were identified: 29 patients initially received epoetin alfa and 30 patients initially received darbepoetin alfa. Data were collected on dosage and duration of treatment with these agents, hemoglobin (Hb) response measures, red blood cell transfusions, and health care resource consumption and analyzed at follow-up time points of 28, 56, 84, and 112 days. **RESULTS:** A significantly faster Hb response and increase in Hb levels was observed in patients treated with eEpoetin alfa compared to patients treated with Darbepoetin alfa. Lower dosages are used in actual clinical practice than recommended in Swedish treatment guidelines. No significant differences in resource utilization or in health care costs between epoetin alfa- or darbepoetin alfa-treated patients were found. At a follow-up of 112 days, the mean treatment cost per patient was SEK74,701 (approximately US\$9800 or 8300€) with epoetin alfa and SEK85,285 (approximately US\$11,000 or 9500€) with darbepoetin alfa. Drug acquisition and administration costs accounted for 81% and 67% of total costs for epoetin alfa- and darbepoetin alfa-treated patients, respectively, with remaining costs accounted for by hospitalization and transfusions. **CONCLUSIONS:** Epoetin alfa was asso-

ciated with a significantly faster Hb response, and significantly higher increases in Hb levels compared with darbepoetin alfa, as used clinically. While the costs are in favor of epoetin alfa, they are not significantly different for the two treatment arms. Lower dosages of both agents are used in actual clinical practice than recommended in Swedish treatment guidelines.

## PCN38

**THE IMPACT OF SCREENING ADHERENCE ON MEDICAL EFFECTIVENESS AND COST-EFFECTIVENESS OF CERVICAL CANCER SCREENING IN GERMANY—A DECISION ANALYSIS**  
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**OBJECTIVES:** To systematically evaluate the impact of screening adherence on clinical effectiveness and cost-effectiveness of cervical cancer screening (CCS) in Germany using a decision analytic approach. **METHODS:** A decision-analytic Markov model was used to evaluate long-term clinical and economic outcomes for the following CCS strategies: 1) no screening; 2) conventional Papanicolaou test with manual smear analysis (PAP); 3) PAP with automated smear analysis (AA); 4) liquid-based preparation (LP) with manual smear analysis; and 5) LP in combination with AA. German clinical, epidemiological and economic data were used. German clinical practice in screening, diagnosis, and treatment of cervical cancer and its precursors were considered. Calculated outcomes were detected/prevented cervical cancer cases and deaths, life expectancy, lifetime costs, and discounted incremental cost-effectiveness ratios (ICER). We adopted a societal perspective with a three percent (3%) annual discount rate. In the absence of individual data, screening adherence was modeled to be independent from screening history. **RESULTS:** In women adherent to screening, annual PAP saved 94 life days, when compared to “no screening”, and new CCS strategies saved additional 0.5 days. Assuming 50% adherence annual screening with new strategies would save additional 3 days compared to annual PAP screening with 50% adherence and would be nearly equally effective as annual PAP with complete adherence. Assuming a societal willingness-to-pay of 50,000€/LYS, annual PAP compared to “no screening” was cost-effective independent of screening adherence. Annual screening with new strategies compared to PAP was not cost-effective in adherent women, but may be cost-effective with 65% (AA) or 40% (LP or LP + AA) or lower adherence. **CONCLUSIONS:** For the current clinical standard of annual cervical cancer screening in Germany, PAP screening is both medical effective and cost-effective independent of adherence. New CCS strategies may be effective and cost-effective in women who do not regularly attend annual screening programs.

## PCN39

**QUALITY ASSURANCE IN CANCER CHEMOTHERAPY THROUGH PHARMACEUTICAL CARE DOCUMENTATION**

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**OBJECTIVES:** Develop and categorise pharmaceutical care activities that contribute to the care of patients receiving cancer chemotherapy. **METHODS:** A retrospective survey of clinical